

ABSTRACT OF THE DISCLOSURE

An optical element includes a substrate; a first diffraction grating disposed on the substrate and having a period that is shorter than a light wavelength used; and a second diffraction grating disposed on the first diffraction grating and having a period that is shorter than the light wavelength used. In the optical element, the melting point of a material of the first diffraction grating is higher than the melting point of a material of the second diffraction grating.